**True and Compass Bearings**

Compass and True Bearings are used for direction. Compass and true bearings are very similar but different at the same time.

Example

Compass Bearings

N

The easiest way to learn compass bearings is to follow these four steps

135

Step One- Is it closer to North or South?

W

E

Step Two- What direction is it heading? East or West?

Step Three-How far has it moved in that direction?

S

45

E

45

S

Step Four- Write it out in the correct format.

Did you follow my instructions? Let’s see if you can answer the following;

N

N

1 2

Did you get them right? Let’s go through them together!

60

E

W

S

68

W

E

S

1

1. Its closer to north so we start with: N
2. Its heading in the direction of west, so now we should have:

N W

1. It has moved 68 in direction.
2. We write in the correct format.

SO the answer is: N 68 W

60

W

S

N

2

1. Its heading closer to south so we start with: S

E

1. It is heading in the direction of west so it now should look like this:

S W

1. It has moved 60 in the direction
2. We write it in the correct format

SO the answer is: S 60W

Here’s another question! But notice anything different?

N

W

E

S

In this situation you subtract the degrees you see from 90, because the area of measurement is 90. In this case its 90-30= 60. It is basically changing step 3 to: subtract degrees from 90. So the answer would be:

S60E

Did you get those done? Let’s do through them together

75

2

W

E

S

N

20

1

W

E

S

N

90-30=60

In this situation the measurement is coming from the east instead of the two main points on the compass (north and south.)

30

Get that? Well here are some questions to prove it!

1. It is closer to north
2. It is heading 75towards north
3. 90-7515
4. Write it in the correct format

SO the answer should be:

N15W

1. It is closer to north
2. It is heading 20towards north
3. 90-2070
4. Write it in the correct format

SO the answer should be:

N70W

N

S

E

W

1

E

W

75

Get that? Well here are some questions to prove it!

2

N

S

Did you get those done? Let’s do through them together

1. It is closer to north
2. It is heading 75towards north
3. 90-7515
4. Write it in the correct format

SO the answer should be:

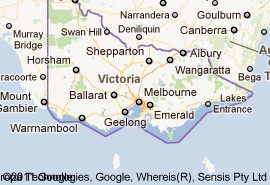
N15W

1. It is closer to north
2. It is heading 20towards north
3. 90-2070
4. Write it in the correct format

SO the answer should be:

N70W

Now try using compass bearings to answer the following, you will need a patractor:

[](http://maps.google.com.au/maps?hl=en&q=map+of+victoria&gs_upl=107983l112242l0l112897l15l11l0l0l0l0l0l0ll0l0&bav=on.2,or.r_gc.r_pw.,cf.osb&biw=1311&bih=593&wrapid=tlif132056936473210&um=1&ie=UTF-8&hq=&hnear=0x6ad4314b7e18954f:0x5a4efce2be829534,Victoria&gl=au&ei=hUq2TtfcKoaOmQWYu_T1BA&sa=X&oi=geocode_result&ct=image&resnum=1&ved=0CC8Q8gEwAA)

1. Melbourne to Shepparton
2. Ballarat to Canberra

Answers:

1- N 10 E

2- N 60 E

80

55

40

5

4

3

2

1

Find the compass bearings by using the coloured arrows

REVISION TIME!

Try and see if you remember all this! (Remember the 4 steps!)

W

E

S

N

W

E

S

N

W

E

S

N

W

E

S

N

N

S

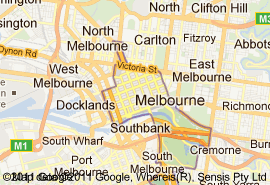
E

W

60

Tip: It’s just like doing normal compass bearings but you just need a patractor.

Using the map above find the compass direction of:

[](http://maps.google.com.au/maps?um=1&hl=en&q=Map+of+Melbourne&gs_upl=9422l13213l0l13431l16l15l0l6l6l1l343l2525l2-7.2l9l0&bav=on.2,or.r_gc.r_pw.,cf.osb&biw=1311&bih=593&wrapid=tlif132057286440511&ie=UTF-8&hq=&hnear=0x6ad642af0f11fd81:0x5045675218ce7e0,Melbourne+VIC&gl=au&ei=w1e2TrrcKKGJmQWV1Z28Aw&sa=X&oi=geocode_result&ct=image&resnum=1&ved=0CCkQ8gEwAA)

5- West Melbourne Southbank

2- North Melbourne to Cremorne

1. Docklands to Southbank

ANSWERS!

1-S70E

2-S50E

3-S10W

4-S75E

5-60E

1-S60W

2-N40E

3-S45E

4-N55E

5-N10E

4- Docklands to Cremorne

3- Carlton to Southbank

What is the compass direction of:

BUT WAIT THERE’S MORE!

True Bearings

360/

True Bearings a very similar to compass bearings except it’s not broken into four quarters so you can get a degree over 90. The answer you want is the distance. A true bearing is an angle measured clockwise from north.

N

135

W

E

45

270

180

90

O

A

S

When answering this think of the four main points on a compass because they are a guide to help you. Each point has a degree that will help you when adding or subtracting.

80

O

A

W

S

N

Measure the distance from A to O

Since the start point is north, the distance of measurement is 45 far from south so 180+45=225. So the answer is:

225 True

W

S

N

Now try the following questions. Find the true bearing from A to O:

A

O

45

This start point is A and our distance O, is 45 far from A so our conclusion is-

45 True

Finished? Let’s go through them together!

First you add 270 + 80 which makes 350 and then subtract 350 from 360 which is ten so then add ten to 270 and you get-

280T

Now Lets try and find the true bearing from:

1. Spring to view
2. View to Spring

You may need a patractor but I have given you a head start-

N

S

W

|  |  |  |  |
| --- | --- | --- | --- |
| Journey | | Return Journey | |
| Distance | Bearing | Distance | Bearing |
| 450km | 90 | 450km | 270 |
| 200km | 180 |  |  |
| 145km | 135 |  |  |

Now use this theory to finish this table to find out the Bearing of the journey home (tip: the distance is always the same) The first one has been done for you. YOU also need a patractor.

To Figure this out you have to find the true bearings for both of them.

Spring

View

45

45

E

N

S

W

E

In this problem the true bearing for spring is 135 true (90 +45) so for question one your answer would be 135 true. But for View you find the bearing from when you receive it so 270+ 45 is 315 so the answer for question 2 is- 315T

Done Already? Well the answers should be:

|  |  |
| --- | --- |
| 450km | 270 |
| 200km | 000 |
| 145km | 315 |

REVISION TIME!

Find the true bearings from A to O

5

4

3

2

1

Black

O

A

70

A

O

80

O

A

45

O

A

55

O

A

55

Find the true bearings from;

1-Black to Burn

2-Burn to Black

N

S

W

60

W

E

S

N

W

E

S

N

W

E

S

N

W

E

S

N

60

S

W

E

N

W

E

S

N

E

Complete the table by finding out the distance and bearing for the return journey

Burn

|  |  |  |  |
| --- | --- | --- | --- |
| Journey | | Return Journey | |
| Distance | Bearing | Distance | Bearing |
| 500km | 220 | 500km |  |
| 50km | 280 | 50km |  |
| 700km | 300 | 700km |  |
| 200km | 180 | 200km |  |

|  |  |  |
| --- | --- | --- |
| Journey | | Return Journey |
| Distance | Bearing | Distance | Bearing |
| 500km | 220 | 500km | 40 |
| 50km | 280 | 50km | 100 |
| 700km | 300 | 700km | 120 |
| 200km | 180 | 200km | 000 |

To Find a Compass Bearing Remember the four steps:

Step One- Is it closer to North or South?

Step Two- What direction is it heading? East or West?

Step Three-How far has it moved in that direction?

Step Four- Write it out in the correct format.

And a True Bearing is the same but in a clockwork direction!

ANSWERS!

1-150 True

2-35 True

1-225 True

2-135 True

3-120 True

4-80 True

5-110 True